A STUDY OF *HERMINIA TARSICRINALIS* (KNOCH), THE SHADED FAN-FOOT (LEP.: NOCTUIDAE) IN THE BRITISH ISLES

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History

The first occurrence of this species in the British Isles dated from July 1965, when a specimen was taken on the Suffolk coast at Thorpeness by Mr. E. C. Pelham-Clinton and the late Mr. Robin Mere. Pelham-Clinton (1966) gave details of the diagnostic characters which separate *Herminia tarsicrinalis* (Knoch) from *H. tarsipennalis* (Treitschke) and *H. nemoralis* (Fabricius). He also mentioned that on the continent it is one of those species presently extending its range northwards, and added that the stated pabula are dead leaves of blackberry, raspberry and *Clematis*.

The possibility that this species was resident in Suffolk was made likely by the capture of a further specimen in the same general area two years later by Dr. A. A. Myers. The status of this species was next discussed by Dr. C. G. M. de Worms (de Worms 1978) who surprisingly considered it to be a casual immigrant.

Investigation of its status

The first step was to discuss the habits of the moth with Mr. Stig Torstenius of Stocksund, Sweden, who advised that the species was closely associated with bramble thickets and could be obtained by placing the moth trap close to or preferably in the middle of a thicket.

Our first visit to the Thorpeness district took place on the 20 June 1982. The area had an abundance of large bramble thickets among which we sited a number of traps, but because of poor weather conditions and perhaps the early date we saw no sign of our quarry. We returned on the 9 July and were pleased to find our visit coincided with optimum weather for recording moths. Several lights were operated in the same places as our previous expedition, and a sugaring round was laid out, since from experience its two congeners are frequent visitors to the sugar patch. That night we recorded 142 species of macrolepidoptera without seeing *tarsicrinalis*, and we concluded that the original specimens were probably vagrants from another area. Accordingly the next day we investigated other coastal and also inland areas, and that night, with the favourable conditions still prevailing, our chosen inland site

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produced over twenty, mostly worn, male *tarsicrinalis*, all appearing before midnight, and confirming our preconception that this species was indeed resident. The following night the species appeared again in good numbers, including several females, and was found to occupy a larger area.

Fig. 1 *Herminia tarsicrinalis* (Knoch). Male (left), female (right). Natural size.

Identification characters

H. tarsicrinalis (fig. 1) is easily recognised by the pale ochreous-brown colour of the forewing, an almost straight subterminal line, and a darker ochreous-brown median fascia. In *H. nemoralis*, which is generally smaller, the subterminal line curves outwards from the tornus to the apex. In *H. tarsipennalis*, which is usually much larger, the ground colour of the forewing is a darker shade of brown.

Life history and description of imature stages

Ova were freely laid by captive females by placing them in small plastic boxes lined with netting. The newly laid ovum is pale green, shining, hemispherical, and rounded at the base; the coronal area is reticulated. The head becomes visible prior to hatching and half the eggshell is eaten by the newly hatched larva. The egg stage lasted ten days and the first larva hatched on 23 July.

The first instar larva resembled that of a geometrid and was very active. It is pale translucent green in colour with a darker olive-green dorsum, and a pale green head with five black setae emanating from raised black papillae.

A mixture of dandelion, dock, knotgrass, raspberry and bramble was offered and the larvae showed a preference for bramble with a predilection for withering and even mouldy leaves; a habit of this group. The second instar began between the 28 July and the 3 August and at this stage the larva is 6mm in length, has well-developed

prolegs, and a basic brown ground colour with a darker brown dorsal area. The larvae were kept in an unheated room, average temp. 65°F., and by the 14 August the larger had reached the fourth instar, suggesting that they were going to produce a second generation in the autumn. The full-grown larva is 18mm in length and has a small head in relation to its body, the latter being somewhat flattened so that the larva appears to be closely appressed to its pabulum. The head is dull brown, freckled with darker brown spots. The body is light brown with each segment having dorsally a darker brown v-shaped area pointing towards the anal end, and laterally an oblique reddish-brown dash running down to the black spiracle. The body is lightly covered with vestigial setae. The twelve larger larvae pupated between the 26 August and 1 September, and without forcing emerged between 6 and 24 September.

The pupa is 11-12mm in length and light brown in colour. It is secured in a flimsy cocoon comprising of a few strands of silk pulling the tissue paper or foodplant debris together.

The remaining dozen larvae became rather inactive and showed no signs of pushing ahead and so were transferred to an unheated garage. In late February an inspection revealed that several larvae had died and on introducing some bramble leaves the survivors started to feed a little, suggesting that they like to nibble during the winter months. These larvae eventually became full fed in early April and pupated towards the end of the month; the adults emerging about the middle of May.

Conclusions

A further visit to the site in 1983 showed the species to be equally plentiful and well established, and in the same year others reported it several miles away from a new locality. It is likely that it will be found elsewhere in Suffolk, and possibly in other counties, now that its type of habitat is better understood.

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References

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